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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,601	01/24/2006	Kenichiro Tanaka	P29101	2841
7055 7590 01/21/2009 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				
EXAMINER NGUYEN, JOSEPH H				
ART UNIT 2815		PAPER NUMBER		
NOTIFICATION DATE 01/21/2009		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

### Office Action Summary

**Application No.**

10/565,601

**Applicant(s)**

TANAKA ET AL.

**Examiner**

JOSEPH NGUYEN

**Art Unit**

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue et al. (U.S. Patent No. 6,333,522).

Regarding claim 1, Inoue et al. discloses in figure 7B a light emitting device formed depositing p type and n type nitride semiconductor layers comprising deposited p type and n type nitride semiconductor layers 35, 32; a semiconductor surface electrodes 5, 6 to apply currents into each of the semiconductor layers; an insulating layer 39 which holds the semiconductor layers, said insulating layer comprising two surfaces; and mount surface electrodes 25a, 24 provided on one surface of the insulating layer which is opposite to the other surface of the insulating layer where the semiconductor surface electrodes 5, 6 are made; wherein one of the semiconductor layers 32 has a non-deposited area where the other semiconductor layer is not deposited; one of the semiconductor surface electrodes 6 is built up on the surface of

the non-deposited area; vias (holes formed in element 39 wherein conductive elements 25a, 24 are formed) are made in the insulating layer 39 which electrically connect the semiconductor surface electrodes 5, 6 and the mount surface electrodes 25a, 24; the semiconductor surface electrodes 5, 6, the insulating layer 39, and the mount surface electrodes 25a, 24 are built up in this order on one side of the deposited semiconductor layers 32, 35; and the other surface of the deposited semiconductor layers 32, 35 is used as light emitting surface and there are no obstacles including obstacles comprising *electrodes* on the surface. See col. 6, lines 40-65.

Regarding claim 3, Inoue et al. discloses in figure 7B the vias are filled with electric conductor.

3. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Sano (U.S. Publication No. 2003/0038294).

Regarding claim 1, Sano discloses in figure 1 a light emitting device formed depositing p type and n type nitride semiconductor layers comprising deposited p type and n type nitride semiconductor layers 9, 2; a semiconductor surface electrodes 20, 21 to apply currents into each of the semiconductor layers; an insulating layer 31 which holds the semiconductor layers, said insulating layer comprising two surfaces; and mount surface electrodes 22a, 23a provided on one surface of the insulating layer which is opposite to the other surface of the insulating layer where the semiconductor surface electrodes 20, 21 are made; wherein one of the semiconductor layers 2 has a non-deposited area where the other semiconductor layer 9 is not deposited; one of the

semiconductor surface electrodes 21 is built up on the surface of the non-deposited area; vias 31a, 31b are made in the insulating layer 31 which electrically connect the semiconductor surface electrodes 20, 21 and the mount surface electrodes 22a, 23a; the semiconductor surface electrodes 20, 21, the insulating layer 31, and the mount surface electrodes 22a, 23a are built up in this order on one side of the deposited semiconductor layers 9, 2; and the other surface of the deposited semiconductor layers 9, 2 is used as light emitting surface and there are no obstacles including obstacles comprising *electrodes* on the surface. See paragraphs [0036] - [0038].

Regarding claim 2, Sano discloses the insulating layer 31 is made of one of silicon (paragraph [0079])

Regarding claim 3, Sano discloses in figure 1 the vias 31a, 31b are filled with electric conductor.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al. in view of Lowery et al. (U.S. Patent No. 6,878,973).

Regarding claim 4, Inoue et al. discloses in figure 7B substantially all the structure set forth in claims 4 except for phosphor being provided on the surface of the

semiconductor layer. However, Lowery et al. discloses in figure 2 a nitride light emitting device comprising phosphor 17 is provided on a surface of the semiconductor layer 23 so as to reduce contamination of the light emitting diode by the phosphor material (Abstract). In view of such teaching, it would have been obvious at the time of the present invention to modify Inoue et al. by including phosphor being provided on the surface of the semiconductor layer as to reduce contamination of the light emitting diode by the phosphor material.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.
7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Nguyen whose telephone number is (571) 272-1734. The examiner can normally be reached on Monday-Friday, 8:30 am- 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Parker can be reached on (571) 272-2298. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Joseph Nguyen/  
Examiner, Art Unit 2815  
/Kenneth A Parker/

Supervisory Patent Examiner, Art Unit 2815

